

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (cancelled)

2. (cancelled)

3. (currently amended) ~~The A~~ prestressed composite girder ~~as set forth in claim 1, comprising:~~
shear reinforcing bars and main reinforcing bars arranged across the prestressed composite girder;
sheaths adapted to contain steel wires arranged across the prestressed composite girder;
sole plates placed at ends of the prestressed composite girder and provided with shear connecting members; and
steel plates placed in upper and lower flanges of the prestressed composite girder, provided with shear connecting members, and embedded across at least a portion of an entire length of the prestressed composite girder;

wherein, for a simple bridge, the steel plates placed in the upper and lower flanges are embedded across an entire length of the prestressed composite girder except ranges extending from both ends of the prestressed composite girder by about 15% of a span.

4. (currently amended) ~~The A~~ prestressed composite girder ~~as set forth in claim 1, comprising:~~
shear reinforcing bars and main reinforcing bars arranged across the prestressed composite girder;
sheaths adapted to contain steel wires arranged across the prestressed composite girder;
sole plates placed at ends of the prestressed composite girder and provided with shear connecting members; and

steel plates placed in upper and lower flanges of the prestressed composite girder, provided with shear connecting members, and embedded across at least a portion of an entire length of the prestressed composite girder;

wherein, for an outside span of a continuous bridge, the steel plates embedded in the upper and lower flanges of the prestressed composite girder are embedded in a negative moment range extending from one end of the prestressed composite girder by about 15% ~~10-15%~~ of a span.

5. (currently amended) ~~The A~~ A ~~prestressed composite girder as set forth in claim 1, comprising:~~

shear reinforcing bars and main reinforcing bars arranged across the prestressed composite girder;

sheaths adapted to contain steel wires arranged across the prestressed composite girder;
sole plates placed at ends of the prestressed composite girder and provided with shear connecting members; and

steel plates placed in upper and lower flanges of the prestressed composite girder, provided with shear connecting members, and embedded across at least a portion of an entire length of the prestressed composite girder;

wherein, for an outside span of a continuous bridge, the steel plates embedded in the upper and lower flanges of the prestressed composite girder are embedded in a negative moment range extending from one end of the prestressed composite girder by about 15% ~~10-15%~~ of a span, and a range extending from a point of a greatest positive moment to right and left thereof by about 20%.

6. (currently amended) ~~The A~~ A ~~prestressed composite girder as set forth in claim 1, comprising:~~

shear reinforcing bars and main reinforcing bars arranged across the prestressed composite girder;

sheaths adapted to contain steel wires arranged across the prestressed composite girder;

sole plates placed at ends of the prestressed composite girder and provided with shear connecting members; and

steel plates placed in upper and lower flanges of the prestressed composite girder, provided with shear connecting members, and embedded across at least a portion of an entire length of the prestressed composite girder;

wherein, for an inside span of a continuous bridge, the steel plates embedded in the upper and lower flanges of the prestressed composite girder are embedded in negative moment ranges extending from both ends of the prestressed composite girder by about 15% ~~40-15%~~ of a span.

7. (currently amended) ~~The A~~ A prestressed composite girder ~~as set forth in claim 1, comprising:~~

shear reinforcing bars and main reinforcing bars arranged across the prestressed composite girder;

sheaths adapted to contain steel wires arranged across the prestressed composite girder;

sole plates placed at ends of the prestressed composite girder and provided with shear connecting members; and

steel plates placed in upper and lower flanges of the prestressed composite girder, provided with shear connecting members, and embedded across at least a portion of an entire length of the prestressed composite girder;

wherein, for an inside span of a continuous bridge, the steel plates embedded in the upper and lower flanges of the prestressed composite girder are embedded in negative moment ranges extending from both ends of the prestressed composite girder by about 15% ~~40-15%~~ of a span, and a range extending from a point of a greatest positive moment to right and left thereof by about 20%.

8. (cancelled)

9. ~~The A~~ A method ~~as set forth in claim 8, of fabricating a prestressed composite girder, comprising:~~

arranging shear reinforcing bars and main reinforcing bars across the prestressed composite girder;

arranging sheaths containing steel wires across the prestressed composite girder;

placing sole plates on ends of the prestressed composite girder;

arranging steel plates provided with shear connecting members in upper and lower flanges of the prestressed composite girder; casting concrete into the prestressed composite girder; and

introducing a compressive force to the prestressed composite girder by tensing the steel wires included in the sheaths after the concrete is cured;

wherein, for an outside span of a continuous bridge: the sole plates are placed at one end of the prestressed composite girder where a moment is not generated; and

wherein the steel plates arranged in the upper and lower flanges of the prestressed composite girder are embedded in a range of negative moments extending from one end of the prestressed composite girder.

10. The A method ~~as set forth in claim 8,~~ of fabricating a prestressed composite girder, comprising:

arranging shear reinforcing bars and main reinforcing bars across the prestressed composite girder;

arranging sheaths containing steel wires across the prestressed composite girder;

placing sole plates on ends of the prestressed composite girder;

arranging steel plates provided with shear connecting members in upper and lower flanges of the prestressed composite girder; casting concrete into the prestressed composite girder; and

introducing a compressive force to the prestressed composite girder by tensing the steel wires included in the sheaths after the concrete is cured;

wherein, for an inside span of the continuous bridge: the sole plates are not embedded;
and

wherein the steel plates arranged in the upper and lower flanges of the prestressed composite girder are embedded in ranges of negative moments extending from both ends of the prestressed composite girder.

11. (cancelled)

12. (cancelled)

13. (cancelled)